

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended, is respectfully requested.

Claims 1-12, 14, and 16-27 are pending. Claims 1, 14, and 16 are amended. Claims 13 and 15 are canceled. Support for the amendments is deemed to be evident from the original claims and, with respect to the new language in claim 1 reciting various curable adhesives, previously presented claim 13 and at least specification page 3, lines 3-6. New claims 17-27 are added. Support for the new claims is found in the originally presented claims. With respect to claim 17, support is also found in at least specification page 3, lines 3-6. Thus, no new subject matter is added.

At items 1-2, the Office Action rejects claims 1, 2, 4, 6, 7, 11, and 15 under 35 U.S.C. § 102(b) as anticipated by Demars (U.S. Patent No. 5,855,638). At item 5, the Office Action rejects claims 3, 5, and 8 under 35 U.S.C. § 103 as unpatentable over Demars. At item 6, the Office Action rejects claims 9 and 10 under 35 U.S.C. § 103 as unpatentable over Demars in view of Martin et al. (FR 2819802 also U.S. 2004/0081775). At item 7, the Office Action rejects claim 16 as unpatentable over Demars in view of Hornung et al. (U.S. Patent No. 6,662,523).

At items 8-9, the Office Action objects to claims 12-14 as dependent upon rejected base claims but states that these claims would be allowable if rewritten in independent form. Applicant acknowledges with gratitude the Examiner's indication of allowance of claims 12-14. However, in view of the Remarks below, Applicant does not wish to rewrite claim 12 in independent form at this time.

Amended claim 1 recites a glazing panel including two sheets of glass spaced apart from each other and sealed together along their edges. The glazing panel is provided with a plurality of spaced deposits consisting essentially of an adhesive selected from the group

consisting of a UV-cured adhesive, an aerobic cured adhesive and a heat cured adhesive  
which are arranged between and in contact with the two sheets of glass.

Turning first to Demars, the Office Action asserts that Demars discloses two glass sheets in a vacuum insulated glazing where the two glass sheets are spaced apart by solder glass pins. The Office Action further asserts that Demars can be broadly considered as teaching an adhesive and further asserts that Applicant had not recited a particular adhesive which would distinguish Demars. Applicant has now amended claim 1 to specifically recite various cured adhesives.

The Office Action further asserts that the glass pins in Demars are heat cured since they are formed by use of a solder adhesive. Applicant respectfully traverses this assertion. During soldering heat is applied to the parts of the glass to be joined which causes the solder to melt and be drawn into the joint by capillary action and to bond to the materials to be joined by wetting action. As a result, the soldering operation is based on physical phenomena (melting, capillary action, and wetting). By contrast, curing is a term in polymer chemistry and process engineering that refers to toughening or hardening of a polymer material by cross-linking of polymer chains, brought about by chemical additives, ultraviolet radiation, electron beam or heat. See [http://en.wikipedia.org/wiki/Curing\\_\(chemistry\)](http://en.wikipedia.org/wiki/Curing_(chemistry)) (attached). Similarly, “curing” is defined as a chemical process undergone by a thermosetting plastic by which liquid resin cross-links to form a solid. (Chambers, Dictionary of Science and Technology, p. 291, 2002) (attached).

Demars discloses only joining glass sheets together by a soldering process and not by using a cured adhesive. As explained above, curing refers to toughening or hardening of a polymer material. Thus the currently recited UV-cured adhesive, aerobically cured adhesive and heat cured adhesive are restricted to polymers. See, e.g., the exemplary materials recited in the specification of WELLOMER UV 2086, DELO-PHOTOBOND 4496, LOCTITE 350

UN, DEL)-ML and DELO MONOPOX. Specification page 3, lines 3-6. By contrast, Demars expressly teaches the exclusion of polymers, stating “These pins 4 then undergo a heat treatment so as to eliminate organic substances.” Demars, col. 4, lines 36-37. For at least these reasons, Applicant submits that Demars does not disclose or suggest the presently recited heat curable resins of amended claim 1.

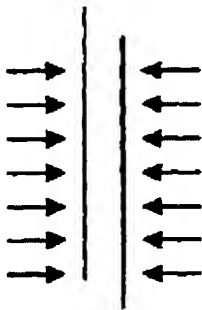
Martin et al. discloses two glass sheets spaced apart by a spacer which is adhesively bonded to a sheet. The spacers are made of materials such as glass or metal. The spacers are then adhered to the glass by an adhesive. ¶ 42. Thus, the spaced deposits of Martin et al. consist of a spaced deposit and an adhesive, but do not “consist essentially of” a curable adhesive as recited in amended claim 1. Consequently, for this reason and the reasons discussed above, the combination of Demars and Martin et al. does not suggest or disclose the cured adhesive of claim 1.

Hornung et al. discloses a window sash where two glazing panes are mounted within an inside perimeter of a mounting structure. The adhesives can be used to mount the glazings by applying various adhesive materials on the periphery of the glass structure. Thus, considering Demars, Martin et al., and Hornung et al. collectively, a person of ordinary skill in the art would be motivated to use a solder material without a polymer (Demars) rather than a cured adhesive, use a spacer together with an adhesive rather than a spacer consisting essentially of an adhesive (Martin et al.), and to use an adhesive on the periphery of the structure (Hornung et al.).

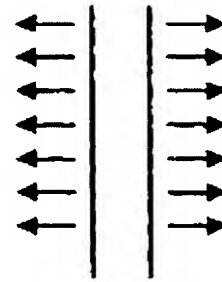
Accordingly, the features of amended independent claim 1 are neither disclosed or suggested, individually or collectively, by Demars, Martin et al., and Hornung et al. Similarly, dependent claims 2-11 and 16, which depend on claim 1, include the features recited in claim 1 and are allowable for the same reasons as claim 1.

New independent claim 17 recites a chromatogenic panel comprising two sheets of glass spaced apart from each other and sealed together along their edges, wherein the glazing panel is provided with a plurality of spaced deposits consisting essentially of an adhesive arranged between and in contact with the two sheets of glass, at least some of the deposits being attached to the surface of each glass sheet. Applicant notes that with respect to pending claims 9 and 10 the Office Action suggests that it would have been obvious combine the teachings of Demars and Martin et al. Applicant respectfully disagrees that it would have been obvious to combine Demars and Martin et al.

In an insulating glass unit such as in Demars where the space between the two glass sheets is under vacuum, the force applied on the glass is from the outside in as shown below in Fig. 1.



**Fig. 1**



**Fig.2**

On the other hand, in a chromatogenic glazing panel such as disclosed in Martin et al., the forces are reversed as the force is applied by the pressure of the solution between the two glass plates pushing out against the glass as shown above in Fig. 2. Thus, spaced deposits in the two different systems serve different functions. In an insulating glass unit, the spaced deposits are used to compensate for the difference in pressure and to keep the two glass sheets away from each other. By contrast, in a chromatogenic glazing panel, the spaced deposits are used to hold the glazing structure together. In other words, the gluing power of

the adhesive is important in the chromogenic glazing panel but not as important in the solder of a system such as Demars. Given the different problems addressed by, and the different functions of, the adhesive in the two systems, Applicant respectfully submits it would not be obvious to a person of ordinary skill in the art to combine the adhesive teachings of Demars in the field of chromogenic glass as in Martin et al. For at least these reasons, Applicant submits that new claims 17-27 are also allowable over the cited references.

For the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance for claims 1-12, 14, and 16-27 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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